

**IN THE CLAIMS:**

Claims 1-24 (Canceled)

25. (New) A hydrogen energy system for one or more buildings, said system comprising:
- (a) a hydrogen generator;
  - (b) at least one zone controller for receiving and processing demands from at least one hydrogen user associated with at least one zone of the one or more buildings;
  - (c) a unit controller for receiving and processing hydrogen demand data received from said at least one zone controller.
26. (New) A system as claimed in claim 25 wherein said hydrogen demand data includes the quantity of hydrogen demanded.
27. (New) A system as claimed in claim 25 wherein said hydrogen demand data includes hydrogen delivery time.
28. (New) A system as claimed in claim 25 wherein said hydrogen demand data includes hydrogen purity requirements.
29. (New) A system as claimed in claim 25 wherein said hydrogen demand data includes hydrogen pressure requirements.
30. (New) A system as claimed in claim 25 wherein said hydrogen demand data includes hydrogen temperature requirements.
31. (New) A system as claimed in claim 25 wherein said hydrogen demand data includes the intended end use of the hydrogen.

32. (New) A system as claimed in claim 25 wherein said hydrogen demand data includes the desired rate of delivery of the hydrogen.
33. (New) A system as claimed in claim 25, wherein said unit controller controls the generation of hydrogen by said hydrogen generator.
34. (New) A system as claimed in claim 25, wherein said unit controller controls the supply of hydrogen to said at least one hydrogen user.
35. (New) A system as claimed in claim 25, wherein said unit controller controls the generation of hydrogen by said hydrogen generator and the supply of hydrogen to said at least one hydrogen user.
36. (New) A system as claimed in claim 25 wherein at least one of said hydrogen users comprises a device for converting hydrogen into electricity.
37. (New) A system as claimed in claim 36 wherein said electricity conversion device is a hydrogen powered internal combustion engine.
38. (New) A system as claimed in claim 36 wherein said electricity conversion device is a fuel cell.
39. (New) A system as claimed in claim 25 wherein at least one of said hydrogen users comprises a device for converting hydrogen into thermal energy.
40. (New) A system as claimed in claim 39 wherein said thermal energy conversion device is a boiler.
41. (New) A system as claimed in claim 39 wherein said thermal energy conversion device is a furnace.
42. (New) A system as claimed in claim 25 further comprising a compressor for compressing hydrogen generated by said hydrogen generator to a minimum desired pressure.

43. (New) A system as claimed in claim 25 wherein said hydrogen generator generates hydrogen at a minimum desired pressure.
44. (New) A system as claimed in claim 25 wherein a plurality of said zone controllers receive and process demands from a plurality of said hydrogen users and communicate said demands to said unit controller.
45. (New) A system as claimed in claim 25 wherein a plurality of said zone controllers receive and process demands for a plurality of said zones of the one or more buildings and communicate said demands to said unit controller.
46. (New) A system as claimed in claim 25 wherein said system provides hydrogen to a plurality of buildings.
47. (New) A system as claimed in claim 46 wherein each of said buildings includes one of said unit controllers, at least one of said zone controllers and at least one hydrogen user.
48. (New) A system as claimed in claim 47 further comprising a building network controller for receiving and processing hydrogen demand data from said unit controllers for each of said buildings.
49. (New) A system as claimed in claim 48 wherein said hydrogen generator generates hydrogen for a plurality of said buildings.
50. (New) A system as claimed in claim 49 wherein said building network controller controls the generation of hydrogen by said hydrogen generator and the supply of hydrogen to said at least one hydrogen user for a plurality of said buildings.
51. (New) A system as claimed in claim 48 wherein said building network controller is in communication with an energy network controller that controls a network of energy sources each having energy source data associated therewith.
52. (New) A system as claimed in claim 49 wherein said building network controller receives and processes said energy source data in order to control the

generation, storage and supply of hydrogen to meet the demands of said hydrogen users for a plurality of said buildings.

53. (New) A system as claimed in claim 25 wherein said unit controller is in communication with an energy network controller that controls a network of energy sources each having energy source data associated therewith.
54. (New) A system as claimed in claim 53 wherein said unit controller receives and processes said energy source data in order to control the generation, storage and supply of hydrogen to meet the demands of said hydrogen users.
55. (New) A system as claimed in claim 36 wherein said electricity conversion device is adapted to deliver energy to an electricity grid.
56. (New) A system as claimed in claim 51 wherein said at least one hydrogen user comprises a device for converting hydrogen into electricity and wherein said electricity conversion device comprises one of said energy sources.
57. (New) A system as claimed in claim 56 wherein said building network controller controls the generation and supply of electricity by said electricity conversion device.
58. (New) A system as claimed in claim 53 wherein said at least one hydrogen user comprises a device for converting hydrogen into electricity and wherein said electricity conversion device comprises one of said energy sources.
59. (New) A system as claimed in claim 58 wherein said unit controller controls the generation and supply of electricity by said electricity conversion device.
60. (New) A system as claimed in claim 25 wherein said hydrogen generator is disposed remotely from said building.
61. (New) A system as claimed in claim 25 wherein said hydrogen generator is disposed proximate to said building.

62. (New) A system as claimed in claim 25 wherein said hydrogen generator is disposed within said building.
63. (New) A system as claimed in claim 25 further comprising a hydrogen storage apparatus for storing hydrogen received from said hydrogen generator for use by said at least one hydrogen user.
64. (New) A system as claimed in claim 63 wherein said hydrogen storage apparatus comprises at least one hydride storage chamber.
65. (New) A system as claimed in claim 63 wherein said hydrogen storage apparatus comprises at least one container for storing pressurized hydrogen.
66. (New) A system as claimed in claim 25 further comprising a hydrogen delivery system for delivering hydrogen to at least one of said hydrogen users.
67. (New) A system as claimed in claim 66 wherein at least one of said hydrogen users comprises a hydrogen powered vehicle.
68. (New) A system as claimed in claim 25 wherein said at least one zone controller includes a user activation interface for receiving data concerning a demand for hydrogen.